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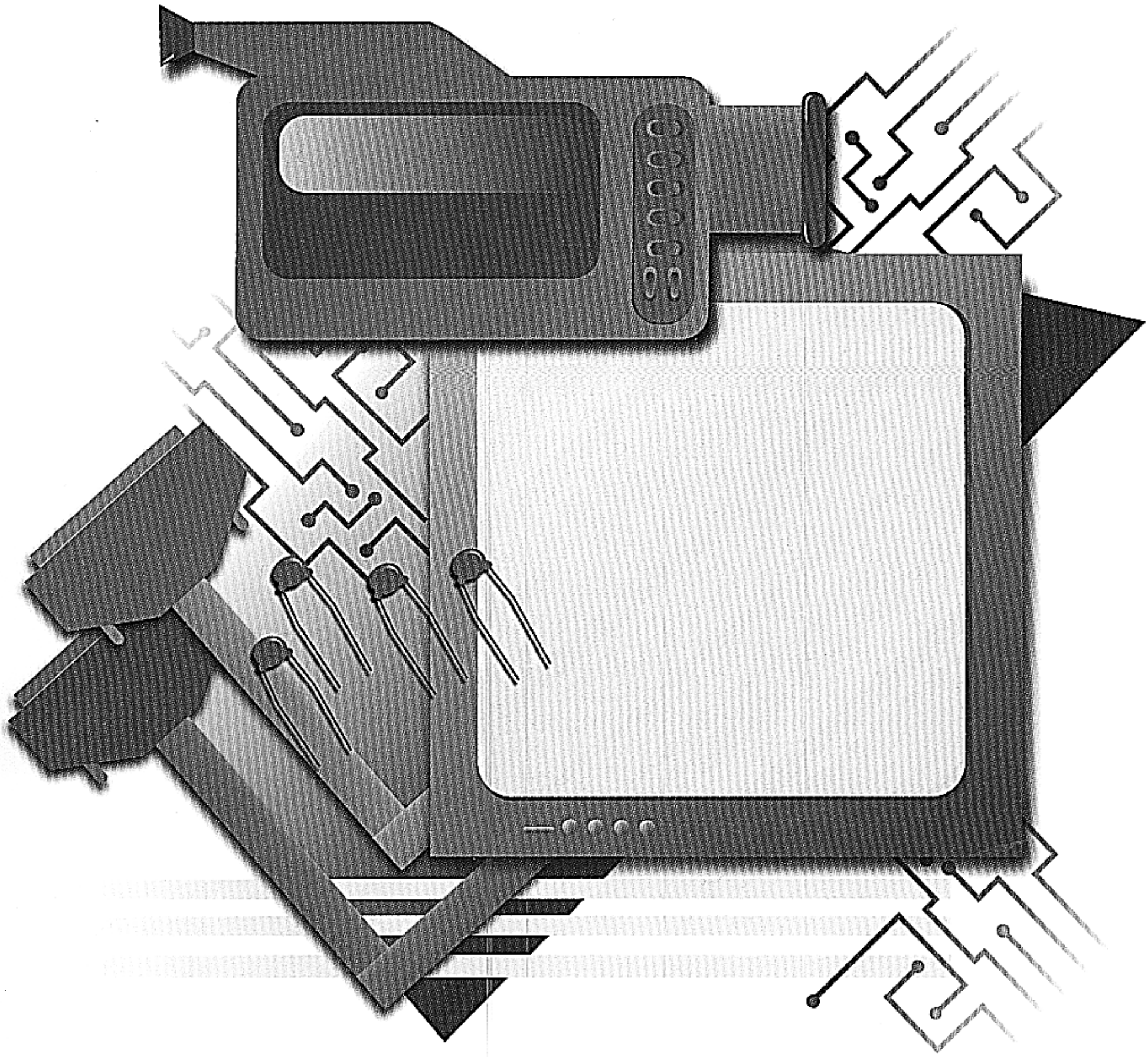
The Video Hacker's Handbook

Carl J. Bergquist



Electronic Projects for Video Enthusiasts

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Introduction

At the outset, I have to tell you that, for me, video is a highly treasured arena. I'm not exactly ancient, but I do remember a time when there wasn't a TV in our house. Perhaps this helps explain my intense fascination with the concept of changing pictures into electrons and back again.

I also remember my amazement at the electronic box my dad brought home one day. I mean, there were people inside the box talking, walking around, and better yet driving cars and riding horses. What was I to make of all this? The only time I had seen anything like it was at the movies, and somehow it wasn't the same.

Thus began a personal captivation with television and the video process that has endured to this day. As for what is sometimes put on TV, that's another story. Video is often a source of frustration rather than fascination, but the mechanics of this marvel have never let me down. To this end, the more I learn about the "nuts and bolts" of video, the more intrigued I become.

With that preface in place, let me talk about this book and why I wrote it. Actually, the preface should suggest one reason why I undertook the project: namely, a love of the subject — but it is not my only purpose.

During many years of experimenting with video, I have made every mistake, stumbled over every obstacle, and generally learned much of what I know the hard way. Now, there is a pragmatic side to doing

things this way; but take it from me, you'd better possess endurance and determination or the finer points of video can drive you to the infamous rubber room.

I lost count of the number of times I abandoned a television project in total disgust, vowing never to touch another video endeavor. However, I always came back, usually with my tail between my legs, only to get an additional dose of the same medicine. I was never able to get the subject out of my system, and eventually realized that video couldn't be as difficult as I was trying to make it — or at least it shouldn't be! So, I stepped back a few paces, took a hard look at what I was doing wrong, and ultimately found my way.

That was many moons ago. Since then, video experimenting has become both a pleasurable experience and a friend. Once I understood the importance of timing in the overall success of any video-related project, the rest was easy. In reality, it wasn't as hard as I thought.

Hopefully, this book will provide the essential information necessary to triumph in the area of video. I say "essential" because not everything on the subject needs to be known. Naturally, the more video information you absorb, the better your comprehension will be. However, what we cover in this text should provide a firm foundation from which you can successfully manage video on your own.

This brings me to another motivation for this outstanding work of technical perfection (Conceited! Who, me?) — that is, to make experimentation within this realm FUN! Over the years, I have encountered far too many individuals who totally lost interest in video due to failed projects. They usually failed because of a lack of basic knowledge about the subject. I hate to see that happen. It's a waste of talent, and can so easily be avoided.

To express this approach to video in another fashion; you don't want do it the way I did it. True, it resulted in a solid comprehension of the technology, but at a cost of undue frustration, painful disappointment and needless toil. Not the ideal way to go. The better way is to take a

"hands-on" approach and, with a little help from your friends, learn as you go along. Fortunately for all of us, developments like the charge-coupled device (CCD) imager have made video less complex and brought prices down to a realistic level. That combined with the projects in this book (optimistically) should put you on the proverbial "fast track" toward learning about this fascinating technology..

Also, credit where credit is due: I wish to thank the following publications for their assistance in preparing Chapter 10. For more information, check these sources.

1. *Compton's Interactive Encyclopedia* (1995)
2. *Electronic Databook* by Rudolf F. Graf: Tab Books (1988)
3. *McGraw-Hill Encyclopedia of Science & Technology* (1992)
4. *World Book Encyclopedia* (1993)
5. *The Video Encyclopedia* by Larry Langman and Joseph A. Molinari: Garland Publishing (1990)

So, here it is! An experimenter's guide to the video domain, designed for those interested in encountering the pleasures this field can furnish. There are many, many fruitful roads one can venture down in a pursuit of — halt, this is beginning to sound like a "dime novel." Seriously, I do want you to relish the same reverence and fascination I hold for this remarkable sphere of electronics — to experience the exhilaration, and in the end, sense the satisfaction an awareness of the video world can bring.

Thanks for your attention, and GO GET 'EM!

Carl Bergquist

The Video Hacker's Handbook

$24.95

Video recording technology has become a vast source of fascination and frustration for many individuals who have wanted to try their hand at creating their own videos. Too often, many of these individuals lose interest in video production due to failed projects resulting from a lack of basic knowledge about the subject. It's a waste of time and talent that can easily be avoided.

The Video Hacker's Handbook is designed to provide the essential information necessary for you to triumph in the area of video recording and production. With help from this book, you will have a firm foundation from which you can successfully manage video, and be comfortable enough with the technology to make experimentation within this realm FUN!

The Video Hacker's Handbook covers the following:

- The Video Lab
- Miniature CCD Black-and-White Cameras
- A Pocket-Sized TV Station
- Working With Color CCD Cameras
- A Home-Built Sync Generator
- A Low-Power VHF Transmitter from a Kit
- Building a Color Bar Generator
- High-Powered Infrared Light Source
- Consumer Items Useful for Video Experimenting
- A Short History of Video and Television

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